Vale District Bureau of Land Management
Crowley Emergency Stabilization and Rehabilitation Plan N133
Environmental Assessment
EA No. OR-030-02-004

I. PURPOSE AND NEED

A. Background

A lighting caused fire originated on public land in T.26S., R.39E., W.M. Section 8 during the morning of July 12, 2001. It burned a total of 3,734 acres of which approximately 315 acres are private and 3,419 acres are public domain in the Malheur Resource Area of the Bureau of Land Management Vale District. Containment was achieved at 2200 on July 13 with control at 2000 on July 14. Two dozers, one grader, a number of engines, one helicopter, a water tender, five fire hand crews and air tankers were used during suppression activities. Access to the fire was by a two track road and 12 miles of bladed fireline used for control lines from which back-burning was conducted. All soil disturbance associated with firelines and roads was adjacent to the fire boundary. The fire lines and roads used for control were reshaped and smoothed to the extent possible before heavy equipment left the scene of the fire. Due to dry soil and extremely dusty conditions, there was a need to delay seeding of roads and bladed line used for fire suppression activities until sufficient moisture was available during the fall of 2001.

The majority of the burned area is within Road Canyon Pasture of South Star Mountain Allotment, and approximately one-third of the fire burnt in the Atturbury Pasture in the South Star Mountain Allotment as identified on page 2. Minor acreage is on private land in the Crowley Pasture in Fence Federal Land. Most of the area burned was dominated by native sagebrush, bitterbrush/bunchgrass vegetation communities and small pockets of western juniper. Native communities contained Wyoming big sagebrush (*Artemisia tridentata ssp*. *wyomingensis*), mountain big sagebrush *(Artemsia tridentata ssp. vaseyana)* bitterbrush(*Purshia tridentata*) rabbitbrush (*Chrysothamnus sp.*), bluebunch wheatgrass (*Pseudorogneria spicata*), Thurber's needlegrass (*Stipa thurberiana*), and Sandberg bluegrass (*Poa secunda*). Scotch thistle (*Onopordum acanthium*), an aggressive biennial, dominates small acreage at a number of locations in and adjacent to the fire boundary. Scotch thistle is also present as a minor component throughout the burned area. Sagebrush steppe vegetation communities provide year-long or winter habitat for a number of wildlife species including big game animals, upland game species, and other sagebrush dependent species.

B. Purpose and Need

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Interagency guidance and BLM policy as stated in H-1742 version 1.0 found at *http://fire.r9.fws.gov/ifcc/Esr/handbook/default.htm* provides for emergency stabilization and rehabilitation where fire has an adverse impact on vegetation, soils, and watersheds and also to minimize other adverse changes to the extent practicable, including the following:

- loss of vegetative cover for watershed protection;

- loss of soil and on-site productivity;
- loss of water control and deterioration of water quality;
- invasion of burned area by flammable annual species which increase the potential for repeated wildfire.

II. CONSISTENCY WITH LAND USE PLANS

In addition to other National Environmental Policy Act requirements, this environmental assessment was completed to ensure that treatments identified in the Emergency Stabilization and Rehabilitation Plan are consistent with the applicable land use plan objectives and decisions. Seeding and planting of shrub species as proposed in the preferred alternative is consistent with the following recommendations of the Northern Malheur Management Framework Plan dated March 14, 1983.

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- W/L 1.1 Seed or plant seedlings of suitable shrub and/or tree species on select sites within areas designated "C" on the Habitat Opportunity overlay. Species under consideration should include juniper, curl leaf mountain mahogany, aspen, cottonwood, willow, choke and bitter cherry. Livestock grazing of the treated areas should be prohibited for a minimum of two growing seasons and then allow spring season use there after.

- W/L 10.1 Within areas marked "F" on overlay, increase the survival of palatable browse species reproduction by 20% from the existing 5% (estimated) by 1990 through the initiation of livestock grazing systems utilizing "prescription" grazing toward a vegetative objective. Coordinated AMP/HMP planning will be required.

- W/L 10.4 Wild fire should be aggressively suppressed in critical browse and/or cover habitats.

- W/L 11.4 Attain and/or maintain a vegetative composition of 55% grasses, 25% forbs, and 20% shrubs.

The Star Mountain Allotment Management Plan does not provide specific management direction for seeding and establishment of shrub species, though it does identify management objectives to improve or maintain upland ecological conditions within native pastures.

Temporary fencing to ensure short-term exclusion of livestock from burned areas pending establishment of seed species and recovery of residual vegetation is also consistent with the Northern Malheur Management Framework Plan and affected activity plans.

Removal of strayed wild horses from the Star Mountain Allotment Plan is consistent with land use plan objectives and decisions.

III. DESCRIPTION OF ALTERNATIVES AND THE PROPOSED ACTION

Alternatives considered and analyzed include a native seeding alternative, of sagebrush and bitterbrush, a limited rehabilitation alternative, and a no action alternative. A summary of treatments analyzed by alternative is presented in table 1.

Table 1: Summarized treatments by alternative

Action \ Alternative	Native Seeding	Limited Rehab	No Action
Seedling shrub planting (acres)*	400	0	0
Aerial sagebrush seeding (acres)*	3419	0	0
Removal of Wild Horses	Yes	No	No
Temporary fencing (miles)*	4	0	0
Temporary livestock exclusion (acres)*	6000	20,409	0
Fireline/Road Seeding (miles)	10	1 0	0
Monitoring*	Yes	Yes	No

* Actions for which Emergency Stabilization and Rehabilitation funding is requested (data are public acreage only).

A. Shrub Seeding Alternative / Proposed Action

The native seeding alternative would include seeding approximately 3419 acres of public land, as depicted on Table 1, using aerial sagebrush seeding and seedling shrub planting during the spring of 2003. (Those areas seeded would include flat and moderately sloped topography.)

All public land acres of the burned area would be broadcast seeded, with Wyoming big sagebrush at a rate of 0.05 pounds pure live seed (pls) per acre (approximately .5 pound per acre bulk). Of the burned area would be planted with 1-0 seedlings of additional shrub species including bitterbrush, and/or sagebrush to provide nurse stock for future colonization of the site by these shrub species. Shrub seedlings would be planted at a rate of approximately 100 seedlings per acre as available in the spring of 2003 utilizing emergency fire rehabilitation funds and in later years as other funding sources and/or seeding are available.

Approximately four miles of temporary fencing would be proposed to exclude

livestock grazing from fire impacted vegetation communities. The burned area would be closed to livestock grazing through July 15, 2003 or until monitoring indicates that desired residual perennial vegetation has recovered to levels that are adequate to support and protect upland function and that seeded and planted species have become established.

No repairs to permanent fence on private land between Road Canyon Pasture and the Crowley Pasture Fence Federal Range would be completed by BLM.

Monitoring of the burn area would consist of livestock use supervision and vegetation monitoring .

B. Limited Rehabilitation Alternative

Emergency stabilization and rehabilitation would be limited to closing Road Canyon Pasture and Atturbury Pasture to livestock grazing through July 15, 2003 and until monitoring indicates that desired residual perennial vegetation has recovered to levels that are adequate to support and protect upland function. The minor acreage of private land burned in Road Canyon Pastures would have livestock use excluded. No repairs to permanent fence on private land between Road Canyon Pasture, and Fenced Federal Range in Crowley Pasture would be completed by BLM.

Approximately 10 miles of road would be seeded to a native grasses to stabilize disturbed soil and reduce available sites for weed establishment. Revegetation of the remainder of the burned area would be allowed to occur from seed and plant material which remain on site and in the soil. Monitoring of the burn area would consist of livestock use supervision, and vegetation monitoring.

Approximately four miles of temporary fence would be constructed in both pastures to exclude livestock grazing for at least two growing season.

C. No Action Alternative

No emergency rehabilitation would be completed. Revegetation of the burned area would be allowed to occur from seed and plant material which remains on site and in the soil. Livestock grazing would not be excluded from Road Canyon

or Atturbury pastures.

No monitoring of the burn area would be completed beyond that scheduled prior to the fire.

Wild horses would not be removed from the burned area.

IV. AFFECTED ENVIRONMENT

A. Vegetation

Native shrub steppe vegetation communities contained Wyoming big sagebrush, Mountain sagebrush, bitterbrush, rabbitbrush, bluebunch wheatgrass, Thurber's needle grass, Sandberg bluegrass and pockets of western juniper prior to the fire.

B. Livestock Grazing

The burn area is primarily within Road Canyon Pasture of South Star Mountain Allotment (00309), and a portion of the burn is located in the Atturbury pasture in the same allotment. Minor acreage of private land adjacent to Crowley Ranch. Road Canyon Pasture includes 14,424 public land acres, and 3,150 acres of private and Atturbury Pasture contains 5,985 acres of public land and 1,183 acres of private land. Two permittees are authorized to graze livestock in South Star Mountain Allotment in there grazing rotation. Active AUMs within the South Star Mountain Allotment is 5,394 AUM`s and each operator uses one pasture Road Canyon Pasture in the grazing rotation while the other operator uses Atturbury Pasture in the other rotation.

Permittee who currently use Road Canyon Pasture in addition to other pastures:

Mike Bentz	2,464AUMs

Permittees who currently use Atturbury Pasture in addition to other pastures:

McEwen Ranch	2,930 AUMs

The area burned during the Crowley fire consumed vegetation in approximately 15% of the Road Canyon pasture and 22% of the Atturbury pasture of the South Star Mountain Allotment. One operator is authorized to graze 350 cattle annually each year after seed ripe from approximately 7/1-10/31 in the Road Canyon pasture. The other operator is authorized to graze 416 cattle annually for approximately two and one-half months at varying times between 4/1and 10/31 in the Atturbury pasture, as identified in the deferred rotation grazing schedule of the South Star Mountain Allotment.

C. Soils/Watershed

The soils found in the Crowley fire area were surveyed and described in Oregon's Long Range Requirements for Water 1969, Appendix I-11, Owyhee Drainage Basin. The project area consists of two soil mapping units from this fourth-order soil survey; 76-77/2-3 and 76-77/4-5. The two units incorporate two classification units that have two slope groups that range between 3-35.

Unit 76-77/2-3
Unit 76 soils on 3-12 percent slopes with approximately 30 percent of the soils claaaified as Unit 77 intermingled in the area.

Unit 76-77/4-5
Unit 76 soils on 12-35 percent slopes with approximately 30 percent of the soils on moderately steep to very steep slopes classified as Unit 77.

Classification Unit 76
Soils are shallow, clayey, very stony, well drained soils over basalt, rhyolite, or welded tuff. They occur on gently undulating to rolling lava plateaus with some very steep faulted and dissected terrain. The soil profile by depth consists of very stony silt loam, stony silty clay, to stony and channery heavy silty clay loams.

Classification Unit 77
Unit 77 soils are very shallow, very stony, rocky well drained soils on undulating to rolling plateaus of basalt, rhyolite, or welded tuff. The soil profile by depth consists of very stony to gravelly loam underlain by basalt or rhyolite. There are rock outcrops associated with this soil.

Although microbiotic crusts have not been inventoried in the proposed burn area, mountain big sagebrush communities often lack significant biological crust cover

due to dense vascular vegetation and accumulating plant litter (USDI, 2001).

D. Watershed/Riparian Areas

The area burned by the fire drains south into Little Crowley Creek which is a tributary of Crowley Creek. These drainages are in the Lower Owyhee subbasin.

The proposed treatment area contains 0.9 miles of identified riparian areas associated with Little Crowley Creek tributary and .2 miles is associated with Long Spring a perennial water source within the proposed treatment area.

E. Wildlife

The proposed treatment area is within year-long range or winter habitat for a number of wildlife species including mule deer and pronghorn antelope, upland game species, and other sagebrush dependent species. There are no wildlife species listed as threatened or endangered under the Endangered Species Act of 1973 in the proposed treatment area. Western sage grouse are a BLM sensitive species. The amount and the type of use by sage grouse in the burn area is not known, however the nearest known leks are two miles south near Crowley Reservoir and two miles southwest near Stockade Mountains.

F. Recreation and Visual Resources

Dispersed outdoor recreation in the proposed fire rehabilitation area consists primarily of off highway vehicle usage, hunting of upland birds and big game animals, and equestrian activities. Some dispersed general sightseeing occurs. The burn and all proposed actions are within a visual resource management (VRM) Class IV area.

The objective of VRM Class IV is to partially retain the existing character of the landscape. Moderate levels of change are acceptable. Management activities may attract attention but should not dominate the view of a casual observer. Changes should conform to the basic elements of the predominant natural features of the characteristic landscape.

G. Cultural Resources / Paleontology

No surveys for cultural resources have been conducted within the burn area.

Prehistoric and historic use of this area has been documented by the presence of artifacts and through oral histories. Prehistoric sites are mainly lithic scatters and camp sites associated with springs and water sources. Native American use of this area would have been associated with the seasonal round as family groups followed the resources from lower elevations in the spring to higher elevations in summer. This area is dotted with springs that would have been utilized by big game species, upland game species and humans.

H. Threatened and Endangered (T&E) Plants

No plant species listed or proposed for listing under the Endangered Species Act of 1973 are known to be present within the area burned. The only species suspected is collomia (Collomia renacta),a U. S. Fish and Wildlife species of concern and a former category 2 candidate species, which is found approximately one- quarter mile on the northwest end of the fire line.

I. Climate/Topography

Crowley Fire occurred in rolling hills where the elevation above sea level ranges from 4800 feet to 4400 feet. Semi desert shrub steppe vegetation communities result from cold winters and hot dry summers. The burned area lies within a 10 to 14 inch precipitation Precipitation occurs primarily as snow fall during the winter with occasional mid-summer thunder storms.

J. Areas of Critical Environmental Concern

No Areas of Critical Environmental Concern area present in the burn area.

K. Other Mandatory Elements

The following mandatory elements are either not present or would not be affected by the proposed action or alternatives:

1. Air Quality
2. Wild and Scenic Rivers
3. Native American Religious Concerns

4. Hazardous wastes
5. Prime or unique farmlands
6. Wilderness or Wilderness Study Areas
7. Wild Horse/Burro Management
8. Wetlands/Riparian/Flood Plains
9. Environmental Justice

V. ENVIRONMENTAL CONSEQUENCES

A. Shrub Seeding Alternative

1. Vegetation

Installation of temporary electric fences as described in the proposed action will result in minimal surface disturbance and compaction to any vegetation remaining after the burns along the fence lines. If construction takes place during vegetative dormancy or when soils are firm, no long term effects are anticipated to the vegetation resources from any of the activities associated with fence construction. Livestock and wildlife may find the new electric fences crossing familiar trailing and grazing locations, and any spring/early summer grazing may result in creation of new livestock or wildlife trailing along the electric fencelines, which may result in limited displacement of perennial species.

Temporary exclusion of livestock from a portion of Road Canyon or Atturbury Pastures, including the burned area and areas seeded and/or planted, would allow recovery of residual desirable species and establishment of seeded species without impacts from cattle grazing.

If carefully monitored for litter build-up and sufficient moisture is received to promote plant growth during the two winters/springs of the deferment period, vigor of all remaining native grass and forb species in the burned areas should be completely restored so that grazing will have no additional impacts as a result of the burn. Mountain sagebrush will resprout within the fire area in a few years. (No other sagebrush or bitterbrush directly impacted will survive the burn. These species will be seeded or aerial broadcasted).

The area is in late ecological condition and the herbaceous component is expected to recover naturally to preburn status within two to three growing seasons. Little mortality is anticipated for native grasses and forbs with the swift-moving fires which occurred mid season when most individual plants were dormant.

2. Livestock Grazing

In the short term, livestock will be excluded from the rested area for at least two growing seasons to protect the area to recover. Temporary reduction in livestock use is currently not anticipated due to the size of the burned area and location of temporary fence construction. Season of use may be reduced, and livestock may be required to come home early if utilization levels are high in the unburned portion of the allotment. Careful monitoring will be conducted to not allow high utilization level to occur in the unburned portion of the allotments.

3. Soils

Soil erosion would increase in the short term as a result of loss of vegetative cover from the fire. Soil erosion rates would decrease as the perennial species gain dominance of the site in years subsequent to seeding. Establishment of perennial vegetation would also be beneficial to reestablishing microbiotic crusts. Exclusion of livestock from the burned and seeded area would prevent further soil erosion. Microbiotic crust would begin to reestablish without hoof disturbance.

4. Wildlife

The proposed action would result in the reestablishment and maintenance of higher quality and greater quantity of year-long forage, browse and cover for mule deer and pronghorn antelope within the project area with the establishment of desirable shrub species. Structural habitat for sagebrush dependent species, including potentially sage grouse, would be restored in the long term with reestablishment of desirable shrub species. Foraging and habitat values provided by perennial herbaceous species would be maintained in pre-fire condition with protection from livestock impacts in addition to fire impacts in the short term.

5. Recreation and Visual Resources

Impacts to dispersed recreation activities would be insignificant. In the event that rehabilitation activities occur during game hunting seasons, any game species close to the activities would be temporarily disturbed.

Visual resources within and adjacent to the proposed action would be enhanced with development of desirable perennial plant species and vegetation structure. Surface impacts of the proposed rehabilitation efforts do not exceed management objectives for visual resource Class IV. Establishment of shrubs through seeding and planting would further remove unnatural lines caused be the fire and suppression actions

6. Cultural Resources / Paleontology

A Class III cultural resources survey would be conducted prior to surface disturbing activities. Sites will be flagged, recorded and avoided as appropriate. A survey for paleo resources will be conducted prior to surface disturbing activities. If paleo resources are located, depending on the nature and extent of the fossil locality, the area will either be flagged and avoided during rehabilitation activities or the fossils will be recovered prior to rehabilitation activities.

7. Watershed/Riparian Areas.

Increased soil erosion would contribute to degraded water quality in the short term. Establishment of perennial vegetation would decrease soil erosion and increase the amount of sediment trapped in the watershed as compared to the no action alternative. Exclusion of livestock from the burned areas would protect the riparian vegetation and water quality.

8. Wild Horses

Stray wild horses would be removed from the burned area and returned to the Cold Springs Herd Management Area (HMA).

B. Limited Rehabilitation Alternative

1. Vegetation

If successful, planting of native shrub species may enhance vegetative diversity which is necessary for wildlife in the area . If no planting of shrub species occurs, limited recovery may occur over a longer time frame and may lack the bitterbrush shrub community.

Temporary exclusion of livestock from the burned area, as well as two pastures would allow recovery of residual desirable perennial species without impacts from cattle grazing.

2. Livestock Grazing

Livestock would not be allowed to graze the burn area through two growing seasons as required by BLM policy. Short term exclusion of livestock from Road Canyon and Atturbury Pastures to provide opportunities for recovery of fire impacted vegetative species would result in the loss of an estimated 1,400 AUM's for cattle in the Road Canyon pasture and 1040 AUMs in the Atturbury pasture. The total AUMs (2440) in these two pastures would not be available to the grazing operator for at least two years.

3. Soils

Soil erosion would increase in the short term as a result of loss of vegetative cover from the fire although overall erosion hazard is low due to slopes and low annual precipitation. Soil erosion rates would decrease as annual and perennial species establish on the site over a two-year period. Under this alternative, erosion rates would not decrease as much as under the other two alternatives due to establishment of annual species. Annual vegetation would reduce soil erosion to an extent, but would not provide as good as protection of the soil surface as perennial vegetation. Annual vegetation would also increase the potential for the frequency of wildfire.

Soil erosion would increase due to hoof action by livestock during the grazing season immediately following the wildfire.

Exclusion of livestock from the burned and seeded area would prevent further soil erosion. Microbiotic crusts would begin to reestablish without hoof disturbance.

4. Wildlife

Wildlife habitat and forage quality would not improve. The loss of shrub habitat would negatively impact big game and sagebrush dependent species over the long term as Wyoming big sagebrush is slow to reestablish within the 10 to 14 inches precipitation zone following fire. Depredation of adjacent private pasture land would increase and be redirected as travel corridors of animals change.

5. Recreation and Visual Resources

The return of game species for hunting may be somewhat delayed, due to the lack of vegetative cover.

Preferred shrubs would not be restored in the short nor long term with the exception of those vegetation communities which would recover with protection from livestock grazing, however, mountain sagebrush would regain dominance in within 10 years. There would be a significant delay in returning the area to an acceptable visual setting of some type of vegetative cover with structure similar to the natural setting.

6. Cultural Resources

There would be no affect to cultural resources from hand planting or aerial seeding as a result of the limited rehabilitation alternative, however surface disturbance may be greater long term from livestock trampling and erosional factors without vegetation to provide surface stability. Similarly, there would be no affect to fossil resources as a result of rehabilitation actions, however unauthorized collection and surface disturbance may be greater from livestock trampling and erosional factors without vegetation to provide surface stability

7. T & E Plant Species

No T & E or special status species or their habitat would be directly affected. The only species suspected is collomia (Collomia renacta,) a U. S. Fish and Wildlife species of concern.

8. Watershed/Riparian Areas

Increased soil erosion would contribute to degraded water quality in the short term. Establishment of perennial vegetation would decrease soil erosion and increase the amount of sediment trapped as compared to the no action alternative. If annuals became established, watershed protection and water quality would not be as high quality as Alternative A. Exclusion of livestock from the burned areas would protect the riparian vegetation and water quality.

9. Wild Horses

Wild Horses strayed from the Cold Springs HMA would be removed and returned to their home range.

C. No Action

1. Vegetation

Potential for repeated wildfire spread may be reduced in the short term absence of the shrub species. The cumulative effects of past and future wildfire adjacent to this burn would cause a continued loss of vegetative diversity and structure which would accelerate with no action.

Continued authorization of livestock grazing within Road Canyon Pasture and the Atturbury Pastures would delay and in many instances preclude recovery of residual desirable perennial species with added impacts from cattle grazing.

2. Livestock Grazing

Livestock would be allowed to continue to graze the burn area and benefit from a flush of growth resulting from the release of nutrients and moisture for herbaceous growth in the short term. As a result, short term positive impacts to livestock grazing would occur with additional forage produced. Long term negative impacts to forage production would result from grazing effects in addition to fire effects to desirable perennial herbaceous species. No long term benefits would occur as there would be no improvement of forage production or vegetative conditions.

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3. Soils

Soil erosion would increase in the short term as a result of loss of vegetative cover. Erosion rates would decrease as the species revegetate the site over a period of one or two. Soil erosion rates would remain higher than under the proposed action or any of the alternatives including seeding of desirable shrub species due to the lack of perennial vegetative cover.

4. Wildlife

Wildlife habitat and forage quality would not improve. The loss of shrub habitat would negatively impact big game and sagebrush dependant species much as identified in the limited rehabilitation alternative.

5. Recreation and Visual Resources

The return of game species for hunting may be somewhat delayed.

Preferred shrub vegetation would not be restored in the short term though it would in the long term with the exception of those vegetation communities which would recover due to inaccessibility by livestock grazing. There would be a significant delay in returning the area to an acceptable visual setting of some type of vegetative cover with structure similar to the natural setting.

6. Cultural Resources / Paleontology

Surface disturbance may be greater from livestock trampling and erosional factors without vegetation to provide surface stability. Similarly, there would be no effect to fossil resources as a result of rehabilitation actions, however unauthorized collection and surface disturbance may be greater from livestock trampling and erosional factors without vegetation to provide surface stability.

7. T&E Plant Species

No T&E or special status species would be directly affected.

8. Watershed/Riparian Areas

Increased soil erosion would contribute to degraded water quality in the short term. Establishment of annual vegetation would not decrease soil erosion to the extent perennial vegetation would in the other alternatives. If annuals became

established, watershed protection and water quality would not be as high quality as Alternative A and B. Livestock use of the burned areas would not protect the riparian vegetation and water quality.

9. Wild Horses

Wild Horses would not be removed and returned to Cold Springs HMA, these horses would be allowed to graze the burned area year long, and may result in negative long term impacts to vegetation.

VI. CONSULTATION AND COORDINATION

The Interagency Emergency Fire Stabilization and Rehabilitation Handbook (H-1742 version 1.0) recommends entering into cooperative efforts for rehabilitation where possible. Cooperators in the proposed rehabilitation effort resulting from the Crowley Fire include private and government entities as follow:

A. Oregon Department of Fish and Wildlife (ODF&W): ODF&W was contacted during plan development to ensure wildlife habitat needs were considered fully with proposed plans.

B South Star Mountain Allotment Permittees: Proposed rehabilitation actions were coordinated with grazing permittees. Permittees have agreed to maintain fences necessary to exclude livestock grazing from burned areas or limit use for two growing seasons, and any additional time determined necessary to ensure successful establishment of vegetation communities resulting from rehabilitation actions.

VII. MONITORING

A. Vegetation

The burned area would be monitored for desirable perennial species, including ocular inspection, to determine degree and extent of establishment within seeded areas as well as vegetative recovery of non-seeded areas. Monitoring will be done in representative areas of seeding treatments and the untreated burned area in at least the

first three years of the project. Monitoring will include measurements of vegetation attributes, photo plots, and techniques to determine species occurrence, composition and vigor.

B. Livestock

Periodic use supervision will be conducted on the project area to ensure livestock are excluded during establishment and recovery of desirable vegetation on the burned area. Following two growing seasons of livestock exclusion, a determination will be made based on monitoring information when livestock grazing can be returned to the burned area and seedings.

VIII. SUMMARY

Vegetation communities affected are dominated by late seral sagebrush-bitterbrush, native perennial bunchgrass species and moderate scattered pockets of western juniper.

The history of wildfire in adjoining rangeland has reduced year-long habitat of big game and sagebrush dependent species. In the absence of the establishment of desirable perennial species, including shrub species, within the burned area, there is potential for increased erosion, loss of soil and repeated wildfire. The proposed action would provide an opportunity to establish and enhance perennial vegetative cover that would protect the soil resource, reduce erosion, minimize noxious weed invasion, reduce sedimentation, enhance wildlife habitat, and reduce the threat of repeated wildfire.

IX. ANNUAL WORK PLAN SECTION

A cost/risk assessment is attached as Appendix 2. Listed below by fiscal year is a summary of ESR (2822) funding needs for the proposed action:

Crowley Fire (N 133)		**FY**	
Description	**Item**	**2002**	**2003**
Plan / EA Preparation	1 WMs	$4,000.	
Plan Administration	1 WMs	$4,000.	
Wild Horse Removal	Labor, Helicopter Gathering	$4,500	
Seed Purchase		$14,500.	

Broadcast Seeding	Equipment/Labor	$17,000.	
Shrub Planting	Seedling Purchase	.	$16,000.
	Labor		$32,000
Rehabilitation Monitoring	Labor	$2,000.	$2,000.
Temporary Fence Construction*	4 miles	$2,000.	
Temporary Fence Removal	4 miles		$2,000.
	Totals	**$48,000**	**$52,000**
* Materials are on hand from previous fire rehabilitation projects. Cost estimate is for construction only.			

X. ESR PROJECT SUMMARY

Fire Name: Crowley Fire
Fire Number: N 133
Fire Control Date: 07/12/2001
Acres BLM Burned: 3419
Start of Rehabilitation Project (Mo./Yr):02/2002
Completion of Rehabilitation Project (Mo./Yr): 09/2003
Miles of Temporary Fence: 4.0
Miles of Permanent Fence Rebuilt: 0
No. of Soil/Watershed Structures: 0
Wild Horse removal from Road Canyon Pasture to Cold Spring HMA (FY2002) $4,500.
Acres Reforestation: 0
Acres of Revegetation[1]: 3400 acres PD broadcast and 400 acres PD seedlings transplanted.

Acres of Burned Area Protected for Natural Regeneration[2]: 3400 PD
Total Acres Rehabilitated[3]: 3400 PD

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[1]**Acres of Revegetation** refers to the acres of the burn that is, aerial seeded, seedlings transplanted, etc. Acreage aerially seeded is not double counted.

[2]**Acres of Burned Area Protected for Natural Regeneration** refers to burned areas that will recover to satisfactory vegetation with exclusion of grazing and/or human uses.

[3]**Total Acres Rehabilitated** equals the acres of revegetation plus acres of burned area protected for natural regeneration.

Estimated ESR Funding Current Year (FY2002): $48,000.
Estimated ESR Funding Second Year (FY2003): $52,000.
Total Cost Rehabilitation Project: $100,000.

XI. LIST OF PREPARERS/REVIEWERS

Ron Rembowski	Range Management Specialist
Steve Christensen	Range Management Specialist
Bob Alward	Outdoor Recreation Planner
Jean Findley	Botanist
Jim Johnson	Wild Horse /Burro Specialist
Diane Pritchard	Archaeologist
Shaney Rockefeller	Hydrologist/Soil Scientist
Al Bammann	Wildlife Biologist
Richard Martinez	Engineering Technician
Jerry Bourasa	Range Technician
Jerry Erstrom	Weed Coordinator/Fire Rehabilitation Coordinator
Lynne Silva	Range Technician, Weeds
Dave Evans	Force Account Work Leader
Jon Freeman	Lands and Realty Specialist
Tom Hilken	Acting Multi Resource Staff/ P & E Coordinator
Tom Dabbs	Acting Field Manager, Malheur Resource Area

XIII. ENVIRONMENTAL ASSESSMENT DECISION REPORT

Finding of No Significant Impact / Decision Record

On the basis of the information contained in this Environmental Assessment and all other information available, it is my determination that the proposed action and all alternatives are in conformance with the land use plan for Malheur Resource Area. The proposed action and all alternatives do not constitute a major federal action

significantly affecting the quality of the human environment and therefore an environmental impact statement (EIS) is not required. It is my decision to implement the proposed action described in this EA (OR-030-02-0004).

/S/ Tom Dabbs 12/18/2001

Acting Area Manager Date
Malheur Resource Area

Appendix 1

NATIVE/NONNATIVE PLANT WORKSHEET

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Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?
Yes [X] No [ ] Rationale: Proposed native shrub species are present in and adjacent to the project area and adapted to the sites proposed for the native seed mix.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?
Yes [X] No [ ] Rationale: Seed reserves are held in the Boise Seed Warehouse. Orders for those species not available from the warehouse have a high probability of being filled. In the event that sufficient native seed is not available to meet needs for proposed actions, other analyzed alternatives include the option to substitute other adapted perennial species consistent with either the native.

3. Is the cost and/or quality of the native seed reasonable given the project size and Land Use and Rehabilitation Plan objectives and the guidance in BLM Manual 1745?
Yes [X] No [ ] Rationale: Although the native seed is more costly its use is reasonable given the project size and direction in BLM Manual 1725 and 1745 on the use of native seed.

4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?
Yes [X] No [ ] Rationale: Native plants should have a reasonable chance for establishment and survival in those areas proposed for the native seeding and planting. In the event of seeding failure due to atypical climatic conditions or other unforseen causes, sources of funding may be pursued to reseed, or replant. .

5. Will the current or proposed land management (livestock, recreation use, wildlife populations, etc.) after the seeding establishment period maintain the seeded native plants in the seed mixture?

Yes [X} No [ ] Rationale: Seeded plants should be able to be maintained on the project area under current uses and proposed uses. Planned protection from domestic animal grazing for two years and until seeded species become established should also benefit residual plants which survived the fire. Grazing schedules have been established to limit growing season livestock use in Road Canyon and Atturbury Pasture to early spring annually with no use scheduled for the majority of the growing season.

Proposed Nonnative Plants in Seed Mixture

1. Is the use of nonnative plants necessary to meet objectives, e.g., consistent with applicable land use/activity plans ?
Yes [ ] No [ ] Not applicable [X], no nonnative seeding is planned.

2. Will nonnative plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?
Yes [ ] No [ ] Not applicable [X], no nonnative seeding is planned.

3. Will nonnative plants stay on the site they are seeded and not significantly displace or interbreed with native plants?
Yes [ ] No [ ] Not applicable [X], no nonnative seeding is planned.

Appendix 2.

"Modified Cost - Risk Analysis"

Treatment	**Cost**
Revegetation	$79,500.
Temporary Protective Fence.....	$4,000.
Fence Reconstruction.....	$-0-
Soil/Watershed Structures	$ -0-
Monitoring.....	4,000
All Other Costs (administrative, clearances, etc.)..	$8,000.
TOTAL	$95,500.

Probability of Rehabilitation Treatments Successfully Meeting ESR Objectives

Treatments	Units	NA	%
Revegetation	3400 acres		80
Nonnative Drill Seeding		X	
Aerial Seeding	3400 acres		50
Planting Seedlings	400 acres		85
Other		X	
Protective Fence to Exclude Grazing	4.0 miles		85
Fence Repair to Exclude Grazing		X	
Soil/Watershed Structures		x	
Retention dams/structures		x	

Ripping, contour furrows, etc.		x	
Matting, watersheds cover, etc.		x	
Other-Clean culverts		x	

Risk of Resource Value Loss or Damage

Identify the risk (high, medium, low, none or not applicable (NA)) of unacceptable impacts or loss of resources.

No Action - Treatments Not Implemented (check one)

Resource Value	NA	None	Low	Mid	High
Unacceptable Loss of Topsoil				X	
Weed Invasion			X		
Unacceptable Loss of Vegetation Diversity					X
Unacceptable Loss of Vegetation Structure					X
Unacceptable Disruption of Ecological Processes				X	
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life		X			
Other - Loss Roads/Ways			X		

Proposed Action - Treatments Successfully Implemented (check one)

Resource Value	NA	None	Low	Mid	High
Unacceptable Loss of Topsoil			X		

Weed Invasion			X		
Unacceptable Loss of Vegetation Diversity			X		
Unacceptable Loss of Vegetation Structure			X		
Unacceptable Disruption of Ecological Processes			X		
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life		X			
Other - Loss Roads/Ways			X		

SUMMARY

The costs of the project and probability of success of the proposed treatments are compared with the risks to resource values if: 1) no action is taken, and 2) the proposed action is successfully implemented. Alternatives may be included in this analysis to assist in the selection of the treatments that will cost effectively achieve the ESR objectives. Answer the following questions to determine which proposed ESR treatments should be selected and implemented.

1. Are the risks to natural resources and private property **acceptable** as a result of the fire if the following actions are taken?

Native Seeding Alternative/Proposed Action Yes |_x| No |__| Rationale for answer: The potential for soil erosion will be reduced in addition to a moderate reduction in the threat of repeated large wildfire. The proposed action will result in more diverse perennial vegetation communities that will meet wildlife needs and rangeland health standards. Costs of seeding and temporary fence construction are acceptable, considering the potential for anticipated diverse communities with use of the identified seed mixture and current forage demand by livestock and wildlife. Land use plan objectives will be moderately met with implementation of the proposed action.

Limited Rehabilitation Alternative Yes |_| No |X_| Rationale for answer: The limited rehabilitation alternative would not reduce erosion potential of the site or improve the diversity of species for wildlife.

No Action Yes |__| No |x_| Rationale for answer: The threat of soil erosion, may occured without treatment. Wildlife habitat objectives for structure and species composition may be lacking.

2. Is there probability of success of the proposed action, alternatives or no action acceptable given their costs?

Native Seeding Alternative/Proposed Action Yes |_x| No |__| Rationale for answer: Recent seedings of native species mixes on adjacent areas on similar soils and precipitation

regimes have been successful under normal climatic conditions and protection from grazing for 2-3 growing seasons. In areas of heavy annual species competition, lower rates of success are anticipated. Protection of burned areas from livestock grazing damage utilizing temporary fences have proved to be moderately successful.

Limited Rehabilitation Alternative Yes |__| No |_x| Rationale for answer: Adjacent areas with similar soils and vegetation that have not been seeded following fire or brush control have become monocultures of perennial species that do not meet wildlife habitat and Rangeland Health needs. Failing to seed select portions of the burned area to adapted shrub species would result in similar unacceptable grass perennial species dominance. Protection of burned areas from livestock grazing damage utilizing existing fences closing grazing in large pastures has proved to be moderately to highly successful, though does impose additional impacts to current livestock grazing practices.

No Action Yes |__| No |x_| Rationale for answer: Failing to seed the burned area to adapted shrub species would result in similar unacceptable vegetation.. Failure to protect burned areas from livestock grazing in the short term would result in additional decline in diversity of native perennial species

3. Which approach will most cost-effectively and successfully attain the ESR objectives and therefore is recommended for implementation from a Cost/Risk Analysis standpoint?

Native Seeding Alternative/Proposed Action |_X_|,
Limited Rehabilitation Alternative |__|,
No Action |__|

Comments: Seeding of native shrub species would also similarly meet rehabilitation objectives in the risk extending the extent of dominance native seedings with limited species and structural diversity in the immediate area. Given the absence of suitable sagebrush for thermal cover and forage, mule deer winter patterns may shift onto private land in the vicinity of Crowley.